

Abstract

Introduction

Goitre is a common problem among children, especially adolescents. We have come a long way since the times of ‘pubertal’ goitre with the recognition that goitre, in any age group, may be associated with hypothyroidism. The incidence of autoimmune thyroiditis also seems to be on the rise in the post iodisation era. This study is intended to evaluate all goitrous children with Thyroid profile and to look for autoimmunity.

Aim of the study

To detect autoimmune thyroiditis in children with goitre.

Objectives:

- 1.To screen all children with goitre for thyroid dysfunction.
- 2.To detect autoimmunity in these children by anti-thyroid antibodies and FNAC.

Materials and methods

All the children with goitre, attending the Paediatric Department of ESIC Medical college and PGIMSR were included in the study. Study population consisted of 107 children. Relevant history and physical examination findings were documented in a preset proforma. Thyroid function tests, anti TPO antibody, ultrasound and Fine Needle Aspiration Cytology of thyroid gland and were done in all cases. The results of the study was analysed statistically.

Observations and Results

Out of 107 children studied, 10 children had evidence of hypothyroidism. Anti TPO antibodies were detected in 11 cases, 23 cases had hypo echogenicity on USG while 8 cases had FNAC evidence of autoimmune thyroiditis. While all the FNAC positive cases had hypothyroidism only 8/11 anti body positive cases had evidence of thyroid dysfunction. Ultrasound findings did not have a consistent correlation with autoimmunity. Three cases Autoimmune thyroiditis with neither evidence of hypothyroidism nor FNAC positivity had antibody positivity as the only evidence of autoimmunity.

We found a strong association of autoimmunity with a combination of parameters namely large size of goitre, firm consistency and evidence of hypothyroidism. On comparing the efficacy of antibody positivity in relation to FNAC in the detection of autoimmunity, we inferred that antibody positivity has a good potential to be used as a diagnostic tool.

Conclusions

1. Prevalence of autoimmunity was 7.5% by FNAC and 10.3% by anti TPO antibodies.

2. Hypothyroidism was detected in 9.34% of goitres.

3. Few cases of Autoimmune thyroiditis may not have associated hypothyroidism at the time of diagnosis and would require serial thyroid profile for early detection of thyroid dysfunction.

4. In a resource poor set up, the screening for autoimmunity could be limited to large goitres of grade 2 or more, which are firm in consistency along with accompanying hypothyroidism

5. Anti TPO antibody positivity is an effective, less invasive and more feasible indicator for detecting AIT in children as compared to FNAC which is considered the gold standard.

6. Ultrasound is not an effective modality to pick up autoimmunity.

Key words: Autoimmune thyroiditis, Hypothyroidism, Goiter, FNAC